

June 10, 1993

Mr. Wayne Hedberg
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Reference: Emergency Response Manual - Goldstrike Mine

Dear Mr. Hedberg:

We have recently completed review and revision of the Emergency Response Manual at Goldstrike. We are enclosing copies of revisions for you to insert in your copy of our manual.

Also enclosed is a label to affix to the folder reflecting the change of ownership from Tenneco Minerals to USMX of Utah, Inc.

If you have any questions, please do not hesitate to call me at (801) 574-3269/3164.

Sincerely,

USMX OF UTAH, INC.



Robert K. Wilson
Environmental Coordinator

RKW:bas

Enclosure:

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DIVISION OF
OIL GAS & MINING

USMX OF UTAH, INC.

GOLDSTRIKE OPERATION

EMERGENCY RESPONSE PROCEDURES

MATERIALS CONTAINMENT

Revised June 1, 1993

RECEIVED

JUN 14 1993

DIVISION OF
OIL GAS & MINING

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INTRODUCTION

This document has been prepared to establish response procedures in the event of an emergency for incidents associated with the Goldstrike Mine. These procedures identify key Goldstrike personnel who would coordinate and supervise and emergency associated with our mining activities. Emergency events include the following:

- fire,
- cyanide release,
- major pit failure,
- accident involving severe injury(ies) or death(s),
- major facility damage,
- exposure of employees or public to hazards,
- departure from permitted activity.

In the event of an emergency an Emergency Response Team from the Goldstrike office will immediately assemble to determine the nature and extent of the emergency and the extent of assistance necessary. Depending on the emergency, the Goldstrike office will immediately notify members of the Lakewood Emergency Site Response Team. If there is any doubt as to whether the incident constitutes an emergency always err on the conservative side and activate the emergency response teams.

The Goldstrike Emergency Response Team consists of the following individuals:

Jim Smith	Mine Manager
Dan Slyter	Plant Process Supervisor
Doug Moore	Mine Superintendant
Robert Wilson	Safety/Environmental Coordinator

The leader of the team will be Jim Smith; in his absence, Dan Slyter and so forth down the line.

The team leader will immediately contact or assign an individual to contact the other team members as well as response team members from Lakewood and support groups from other Tenneco Minerals Company operations.

Robert Wilson is designated as the Safety and Environmental Coordinator. In this capacity, he will work with Dan Slyter to ensure that the Material Safety Data Sheets are reviewed for any chemical planned to be used, to conduct the necessary training, to ensure that the necessary safety equipment and first aid supplies are available and to ensure that the necessary environmental monitoring equipment is available.

and to ensure that the necessary environmental monitoring equipment is available.

In all circumstances, the emergency response procedure is as follows:

- A). Provide first aid to personnel, if needed, clear the spill area;
- B). Notify the Lead Operator, and/or immediate supervisor (the person notified should take charge and contain the spill, if possible, with available means);
- C). Assess the incident, i.e., material spilled, quantity, etc.
- D). Provide further notification based upon Item C above; and
- E) Clean-up/response.

This manual is intended for use in operations related to the leaching operation, carbon adsorption recovery system, lab operations, and precipitate smelting system at the Goldstrike mine.

GOLDSTRIKE EMERGENCY RESPONSE TEAM

TENNECO INC. MGMT LEADERS

Gary Cheatham, Major Projects
H. 713-444-1300
O. 713-757-2618

Tom Slocum, Corp Communications
H. 713-974-0450
O. 713-757-3430

Lloyd Stewart, Environ Affairs
H. 713-447-7772
O. 713-757-4100

John Heussner, Safety
H. 713-288-4220
O. 713-757-2503

GOLDSTRIKE TEAM

Jim Smith, Mine Manager
H. 801-574-2480
O. 801-574-3269/3164

Dan Slyter, Process Supr
H. 801-574-3316
O. 801-574-3269/3164

Bob Macdonald, Mine Eng
H. 801-673-9304
O. 801-574-3269/3164

Robert Wilson, Safety/En
H. 801-628-1532
O. 801-574-3269/3164

EMERGENCY PHONE NUMBERS

In the event of a spill or release of a hazardous substance or oil and other petroleum products, notify one of the following people immediately (start at the top of the list):

<u>NAME</u>	<u>TITLE</u>	<u>HOME PHONE NUMBER</u>
Jim Smith	Mine Manager	(801) 574-2480
Dan Slyter	Mine Process Supervisor	(801) 574-3649
Robert Wilson	Safety/Environmental Coordinator	(801) 628-1532
USMX OF UTAH, INC Mine Site		(801) 574-3164 (801) 574-3269

OTHER CONTACTS:

Dupont Chemical Company (cyanide information)	(901) 357-1546, or (800) 424-9300
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REGULATORY AGENCY PHONE NUMBERS

<u>AGENCY NAME</u>	<u>CONTACT</u> (if known)	<u>PHONE NUMBER</u>
Dixie Resource Area BLM Office	Debbie Pietrzak	(801) 673-4654
Utah Division of Oil, Gas and Mining	Wayne Hedberg	(801) 538-5340
Southwest District Health Department	Wayne Thomas	(801) 673-3528
Utah Division of Water Quality	Lyle Stott	(801) 538-6146
State Health Department	Neil Taylor	(801) 538-6333
Local Emergency Planning Committee - Five County AOG	Kenneth Sizemoore Richard Manwaring	(801) 673-3548
National Response Center		(800) 424-8802

LOCAL EMERGENCY RESPONSE NUMBERS

If outside help is needed, contact the following appropriate responders:

County Sheriff's Office	(801) 634-5730
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Ambulance	(801) 634-5000
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Life Flight Helicopter	(702) 383-1000
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DOWNSTREAM USER CONTACTS

Herb and June Fletcher D.I. Ranch (Irrigation, Stock, Domestic Water Use)	No Phone Must Contact In Person
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USBLM Dixie Resource Office (Stock)	(801) 673-4654
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Welsey and Sara Atkin El Rancho Motoqua Inc. (Irrigation, Stock, Domestic Water Use)	(801) 673-4361 or (801) 628-3383
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Dennis Iverson Snows Lazy S-I Ranch (Irrigation, Stock)	(801) 673-2936
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Arizona Department of Environmental Quality	24-Hour (602) 257-2330
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Nevada Division of Emergency Management	8:00-5:00 M-F (702) 687-4240
After 5:00 P.M., Weekends	(702) 687-5300

FLIGHT FOR LIFE EMERGENCY PROCEDURES

In the event that we should need to use the Flight for Life from Las Vegas, we want everyone to be aware of procedures to use.

FLIGHT FOR LIFE - (702) 383-1000

This number is posted in the TMC office by all phones and by the ambulance key.

1. When you call, identify our location as:

**"USMX OF UTAH - GOLDSTRIKE MINE
Northwest of St. George, Utah"**

They have an aeronautical map on file with our location which they will pull and give the pilot to get them here.

2. Wait by the phone for Flight for Life to call back and confirm the emergency. They will not send the chopper if they can not confirm. Have as many details as possible as to number and nature of injuries.

3. Locate suitable site and prepare for arrival of helicopter.

- a. Need a flat area approximately 100' radius for chopper to land.

- b. Try to get up some sort of temporary wind sock to aid pilot.

- c. Probably locate ambulance at landing site with lights **ON** to attract attention of pilot.

- d. Tune radio to Channel 4 (Washington County Sheriff's Office repeater). Flight for Life has been given this frequency for emergency use and the pilot will be able to talk to you on the way up for probably 15 minutes before they actually arrive.

There are four (4) radios on site which have this frequency. Locations are:

Plant	Office
Lab	Ambulance

e. Have one ground man signal in chopper. If it happens to be during the night, you will need to light landing area and windsock, if possible.

In the event the phone system should be out of order when you need to make a call, go to the radio and call the Sheriff's office on Channel 4. REQUEST them to call FLIGHT FOR LIFE via phone.

FEDERAL SPILL REPORTING REQUIREMENTS

Oil and Other Petroleum Products:

Report spills into or upon "navigable waters of the United States" or adjoining shorelines to:

U.S. Coast Guard		
National Response Center	(800) 424-8802	24-hours
	(202) 426-2675	24-hours

NOTE: "Navigable Waters" include all surface waters.

Hazardous Substances:

Report any release equal to or exceeding the "reportable quantity" in any 24-hour period to the environment to:

U.S. Coast Guard		
National Response Center	(800) 424-8802	24-hours
	(202) 426-2675	24-hours

NOTE: The reportable quantity for sodium cyanide is 10 pounds.

The reportable quantity for hydrochloric acid (HCL) is 5,000 pounds.

The reportable quantity for chlorine gas is 10 pounds.

The reportable quantity for calcium hypochlorite is 10 pounds.

UTAH SPILL REPORTING REQUIREMENTS

Oil and Other Petroleum Products:

Report spills directly into and/or that have the potential of getting into "waters of the state" to:

Utah State Department of Health
Division of Environmental Health
Bureau of Water Pollution Control (801) 538-6333 24-hours

Local Emergency Planning Committee
Five County AOG (801) 673-5438

NOTE: "Waters of the State" include surface waters, groundwaters and wetlands.

Hazardous Substances:

Report spills or releases that are equal to or exceed the "reportable quantity" or that could threaten human health or the environmental outside the facility to:

Utah State Department of Health
Division of Environmental Health
Bureau of Water Pollution Control (801) 538-6333 24-hours

Local Emergency Planning Committee
Five County AOG (801) 673-5438

If a spill or release requires reporting to any of the above agencies, the following agencies should also be notified:

Utah Division of Oil,
Gas and Mining (801) 538-5340

Dixie Resource Area
BLM Office (801) 628-4491

Southwest District
Health Department (801) 673-3528

Utah Division of
Water Quality (801) 538-6146

WRITTEN SPILL REPORTING REQUIREMENTS

FEDERAL AND STATE:

If the spill or release requires verbal notification to a federal and state agency, a written report of the incident must be submitted to the following agencies within 5 days after the date of the incident:

- Local Emergency Planning Committee for the Five County AOG

Attention: Mr. Kenneth Sizemore
Five County Association of Government
P.O. Box 1550
St. George, UT 84770

- The State Health Department

Attention: Mr. Dennis Downs
Executive Secretary
Solid and Hazardous Waste Committee
P.O. Box 16690
Salt Lake City, UT 84116

The written report shall include the following information:

- a) Name, address and telephone number of the owner/operator.
- b) Geographic location of the spill.
- c) Material spilled and source.
- d) Time and date of spill.
- e) Quantity of material released.
- f) Extent of injuries, if any.
- g) Assessment of the actual or potential hazards (fire, explosion, etc.) to human health or the environment, where applicable.
- h) Amount of aid required.
- i) Action which have been taken or are anticipated to be taken to contain, control and remove the discharge.
- j) Cause of the discharge.
- k) Other pertinent information specific to the discharge.
- l) Other agencies contacted.

LEACH OPERATIONS

Leach operations at the Goldstrike Mine include pad area, heaped ore, pond area, barren process solution makeup and application, and collection of pregnant process solutions.

I) Pad Area:

A) Monitoring of leach pad activities by the operating crew will include:

- 1) Visual observations: Daily inspections of the pad will be done to view pad anchor integrity.
- 2) Piezometers: Daily recordings of piezometers will be made to indicate hydraulic head on the pad for the duration of the first lift of ore on the pad. Thereafter, weekly recordings will be made.
- 3) Leak detection pipes: Daily observations of the leak detection pipe system will be made to indicate pad integrity.
- 4) Leak detection sumps: Daily observations of the leach pad leak detection sumps will be made to indicate sump/liner integrity.
- 5) Precipitation events: Storm events will be closely observed to control leach system operation and monitor diversion ditches/structures. Normal ditch inspections shall be made monthly with daily inspections conducted during storm events. Drainage ditches around leach pads and ponds will be inspected monthly and during each storm event. A total precipitation log and drainage inspection log will be maintained at the process plant.

B) Response:

- 1) Pad anchor integrity will be reported directly to the Lead Operator, Process Supervisor, Mine Operations Supervisor and/or Mine Manager to arrange corrective actions.
- 2) Pad hydraulic head will be reported to the Lead Operator, Process Supervisor, and Mine Manager if the solution head exceeds 1". Notification to the Southwest District Health Department and Utah Division of Water Quality will occur if the solution head exceeds 12".

- 3) Pad system leaks will be reported to the Lead Operator, Process Supervisor, and Mine Manager in the event of any noticeable solution occurrence in the detection bulbs. Notification to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource BLM office, and Utah Division of Oil, Gas, & Mining will be promptly made and investigations as to source, location, and potential contaminant levels undertaken.
- 4) Sump system leaks will be reported to the Lead Operator, Process Supervisor, and Mine Manager in the event of any noticeable occurrence in the leak detection sumps. Notification to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource BLM office, and Utah Division of Oil, Gas, & Mining will be promptly made and investigations as to source, location, and potential contaminant levels undertaken.
- 5) Storm events will be observed for duration and intensity. Diversion ditches and structures will be inspected daily during storms to note any concerns. Water balance will be achieved by (1) not adding fresh water for make-up but using the collected water from the pads that would accumulate in the pregnant solution pond; (2) continued sprinkling which would result in evaporative losses; and (3) pumping water to the new rinse water pond located adjacent to leach pad 1. Observations will be made on the Precipitation Plant Daily Data Report as to event results. Severe storm events which overflow the pond system and result in a discharge to the sediment dam will be immediately reported to the Lead Operator, Process Supervisor, Mine Manager, Southwest District Health Department, Utah Division of Water Quality, Dixie Resource Area BLM office, and Utah Division of Oil, Gas, and Mining.

Discontinuing pumping will result in total loss of control and should be avoided. Movement of the pregnant solution from the pregnant solution pond through the plant and to the barren pond will establish reservoir capacity for the rain collected from the leach pad. It will be of a lower tenor but will have to be processed in order to control the pond levels. This will be continued until a water balance is achieved.

Drainage ditches will be inspected monthly and during each storm event to ensure proper runoff control is maintained and runoff storm water is not added to the leach system. Ditches requiring repair will be immediately cleaned or bermed to ensure proper drainage.

II) Heaped Ore:

- A) Monitoring of the ore heaps by the operating crew will include:
 - 1) Visual observations: daily inspections of the heaped ore will be done to view heap integrity.
- B) Response:
 - 1) Heap stability will be reported directly to the Lead Operator, Process Supervisor, Mine Operations Supervisor, and/or Mine Manager to arrange corrective actions. Catastrophic slip failure beyond the pad surface will be reported as soon as possible to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource BLM office, and Utah Division of Oil, Gas, & Mining as to corrective clean-up. Contaminated soil will be either excavated and loaded onto the leach pad if practical, or it will be neutralized in-place.

III) Pond Area:

- A) Monitoring of the site ponds (fresh water pond, recycle/neutralization pond, barren solution pond, and pregnant solution pond) by the operating crew will include:
 - 1) Visual observations: daily inspections of the ponds will be done to view pond anchor integrity.
 - 2) Leak detection wells: daily inspections of the leak detection sumps will be made to verify pond integrity.
 - 3) Pond overflows: Pond system overflows will be checked periodically and during storm events to observe system water accumulations.
- B) Response:
 - 1) Anchor integrity will be reported directly to the Lead Operator, Process Supervisor, and/or Mine Manager to arrange corrective actions.

- 2) Pond system inspections will be conducted to verify pond liner integrity. Leakage to the pond sumps will be pumped, measured to estimate inflow, and periodically sampled for gold, cyanide, and pH content. The active processing ponds are designed for an accepted leakage rate of 200 gal/acre day. The fresh water pond has no leakage rate limitation. In the event of any leakage to any pond, the Lead Operator, Process Supervisor, and Mine Manager will be notified. Pond repair will be required if the processing ponds exceed 200 gal/acre day. If this is required, Southwest District Health Department, Utah Division of Water Quality, Dixie Resource Area BLM office, and Utah Division of Oil, Gas, & Mining will be notified of the repair and resumption of the pond into service.
- 3) Overflows from the pregnant solution pond and/or barren solution pond will be immediately reported to the Lead Operator, Process Supervisor, and Mine Manager to route corrective water flows. Overflows of the system beyond the fresh water pond will be reported directly to the Lead Operator, Process Supervisor, and Mine Manager. Prompt notification to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource Area BLM office, and Utah Division of Oil, Gas, & Mining will be made prior to clean-up operations. Contaminated soil if minor, will be excavated and placed upon the leach pad. Otherwise, the soil will be neutralized in place.

IV) Barren Process Solution Make-Up:

- A) Monitoring of the barren process solution make-up by the operating crew will include all activities associated in mixing sodium cyanide, sodium hydroxide, and calcium hydroxide to both raw process water and barren solution water:
 - 1) Visual observations: Daily inspections of the dry storage areas, reagent mix areas, and solution pumps and lines will be made to verify a clean and safe work environment.
 - 2) pH monitors: Daily inspections and readings of pH will be made to ensure that solution pH is properly maintained and to prevent the formation of HCN.

B) Response:

- 1) If dry reagent is spilled in the plant area, the Lead Operator and/or Process Supervisor and Mine Manager will be notified. Clean-up efforts will involve removal of as much of the reagent as is possible by broom/shovel, and the rest will be washed down into the drainage sump and into the barren pond.

Inspections of the solution pumps and lines will be made daily to verify no system leakage. Solution leaks will be reported to the Lead Operator and washed down into the drainage sump and into the barren pond.

- 2) pH readings at both the cyanide mix tank and cyanide day tank will be continuously monitored to adjust the solution pH and minimize solution breakdown and volatilization of HCN.

V) Barren Solution Application:

- A) Monitoring of barren solution application by the operating crew will include:

- 1) Visual observations: Daily inspections of the barren process pumps, process double pipe, and solution emitter system will be made to ensure correct system operation.

B) Response:

- 1) Notification to the Lead Operator, Process Supervisor, and/or Mine Manager will be made upon any contained solution leakage to pumps and internal piping so that repair efforts can commence. External pipe solution leakage will require immediate line shutdown, notification to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource Area BLM office, and Utah Division of Oil, Gas & Mining, and initiation of neutralization and clean-up. Any contaminated soil will be excavated and disposed of over a pad if possible, or will be neutralized in-place.

VI) Collection of Pregnant Process Solutions:

- A) Monitoring of the collection of the pregnant process solution by the operating crew will include:

1) Visual observations: Daily inspections of the pregnant solution/pad collection sump and pregnant solution coule pipe will be made to ensure system integrity.

B) Response:

- 1) Notification to the Lead Operator, Process Supervisor, and Mine Manager will be made upon any contained solution leakage in the sump and internal piping so that repair efforts can commence.

In the event of a leak in the pregnant solution collection system, the cell collection lines will be diverted to the neutralization line until repairs can be made to the pregnant solution collection system.

If the neutralization line develops a leak at the same time as the pregnant solution line then the external pipe solution leakage will require immediate cessation of application of barren solution and leaching, damming of the collection sump, back pumping pregnant solution off the pad ditch into the barren solution line and into the barren pond, and finally initiating pipeline repair. In this event, notification to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource Area BLM office and the Utah Division of Oil, Gas and Mining will be made prior to initiation of neutralization and clean-up. If practical, any contaminated soil will be excavated and disposed of over a pad area. Otherwise, the soil will be neutralized in-place.

CARBON ADSORPTION RECOVERY PLANT

Recovery from solution of precious metals values at the Goldstrike mine includes carbon adsorption, carbon stripping/metals electrowinning carbon acid washing, and smelting.

I) Carbon Adsorption:

A) Monitoring of the carbon adsorption process by the operating crew will include:

- 1) Visual observations: daily inspections of the pregnant solution piping and carbon adsorption tanks and interconnecting decant lines will be made to ensure no leakage.

B) Response:

- 1) Pipe leaks and leaks associated with the adsorption process will be reported directly to the Lead Operator and/or Plant Process Supervisor for immediate repair. Any leakage will drain into the wash drain and into the barren pond. Tank leaks and decant line leaks will be reported and repaired in a similar fashion.
- 2) Uncontained solution spills or leaks will be reported directly to the lead operator Plant Process Supervisor, and Mine Manager.

Immediate notification to the Southwest District Health Department, Utah Division of Water Quality, Dixie Resource Area BLM Office, and Utah Division of Oil, Gas and Mining will be made. Clean-up of the contaminated material will include excavation and placement on the ore heaps if possible, or neutralization of the material in-place.

II) Carbon Stripping/Metals Electro-winning:

A) Monitoring of the carbon strip/electrowinning step by the operating crew will include:

- 1) Visual observations: Daily inspections of the strip solution piping, tankage, tank temperatures and pressures, electrowinning cell, and strip pump will be done to insure no process leakage and proper operation.

B) Response:

1) Leakage in the strip circuit will be immediately reported to the Lead Operator and/or Plant Process Supervisor and repairs conducted immediately.

Leakage in the strip circuit will either route directly to the strip solution tank or into the wash drain sump and into the barren solution pond.

III) Carbon Acid Wash:

A) Monitoring of the carbon acid wash process by the operating crew will include:

1) Visual observations: daily inspections of the acid solution piping, acid pump, acid wash station retention berm, drain line, and drainage pond will be made to ensure no acid solution leakage.

2) Inventory accounting: 5-55 gallon drums of 68% strength hydrochloric acid will be maintained on site for acid washing. This is equivalent to 1 months supply of consumable acid. Inventory will be noted monthly.

B) Response:

1) Leakage in the acid wash piping will be immediately reported to the Lead Operator and/or Plant Process Supervisor and repairs conducted immediately.

Acid leakage from the acid storage tank rinse tower, or acid piping will be washed down with fresh water into the collection drain to the wash drain pond (formerly DE pond). The dilute acid will be neutralized with lime or soda ash in the wash drain pond.

2) Acid leakage beyond containment berms will be neutralized with lime or soda ash and the contaminated soil placed upon the leach pad.

PRECIPITATE SMELTING

Smelting operations at the Goldstrike mine include the retort process and melting process. Materials in a solid or molten state will be used (i.e., no solutions are present).

I) Retort Operations:

A) Monitoring of retort activities by the operating crew will include:

- 1) The retort when in operation will be inspected for any spills of solid precipitate.

B) Response:

- 1) Any cleanup of spilled material will involve two operators (including the Lead Operator), Plant Process Supervisor, and/or Mine Manager. All materials will be charged into the retort or into the smelting furnace.

II) Smelting Process:

A) Monitoring of smelting activities by the operating crew will include:

- 1) Visual observations: the smelting furnace area, when in operation, will be inspected for any spills of molten materials.

B) Response:

- 1) Clean-up spills from the furnace will involve two operators (including the Lead Operator), Process Supervisor and/or Mine Manager. All material will be placed back into the smelting furnace, or will be put into a container and stored in the vault until the next time that the furnace is operated.

LAB OPERATIONS

Lab operations at the Goldstrike mine include all activities associated with testing of solid and solution samples to quantify metals values. All reagent usage is small and will either be handled in a solid or small solution form.

I) Lab Analysis:

A) Procedures used by the lab crew will include:

- 1) Visual observations: daily inspections of the lab work area will be made to recognize any accidental materials or solution spills as well as any other unsafe conditions.

B) Response:

- 1) Any materials spills will be immediately cleaned and/or cleaned and neutralized prior to washing the spent material into the lab drain and ultimately into the wash drain pond (formerly the DE pond). Larger material spills will be reported to the Plant Process Supervisor prior to clean-up and/or clean-up and neutralization.

NEUTRALIZATION OPERATIONS

Neutralization operations at the Goldstrike Mine include all activities associated with the potential of neutralizing leach solutions in the event of a discharge of process solutions.

I) Pond Area - Area of Reagent Storage:

A) Monitoring of reagent storage will be made by the operating crew to include:

1) Inventory accounting:

12-fifty-five gal drums of hydrogen peroxide.

5-one ton cylinders of chlorine.

1 ton calcium hypochlorite (granular).

This is sufficient reagent to neutralize approximately 1,000,000 gallons of process solutions to .2 ppm total cyanide. Inventory will be noted monthly.

2) Visual observations: weekly inspections of the inventory will be made to verify no spillage of calcium hypochlorite or leakage of chlorine gas.

B) Response:

1) Inventory discrepancies will be noted by staff accounting, the Plant Process Supervisor and the Mine Manager to resolve accountability and/or re-ordering of additional supplies.

2) Spillage of calcium hypochlorite will be promptly cleaned and placed into sealed barrels. Any leakage of chlorine gas from a stored cylinder will be immediately reported to the Lead Operator, Plant Process Supervisor and/or Mine Manager. The area will be immediately cordoned off and repairs effected (with proper safety gear worn by employees). A release of 10 lbs of chlorine gas or calcium hypochlorite will prompt notification to the Southwest District Health Department, Dixie Resource Area BLM office, and Utah Division of Oil, Gas, and Mining.

MATERIALS STORED ON SITE

Listed in this section are approximate quantities of materials kept on site which may be hazardous.

1. REAGENTS

CHEMICAL NAME	CONTAINERS	AVERAGE AMOUNT ON-SITE
SODIUM CYANIDE	3,000 LB flow bins	21,000 lbs
CARBON (Unused)	1,000 lb sacks	6,000 lbs
NITRIC ACID	55 gal drum	300 gals
HYDROCHLORIC ACID	55 gal drum	110 gals
HYDROGEN PEROXIDE	55 gal drum	300 gals
CHLORINE LIQUID	1 ton steel tank	4 tons
CHLORINE GRANULAR 35%	100 lb drums	1 ton
SODIUM SULFIDE	55 gal drum	55 gals
BORAX	100 lb sack	600 lbs
SODA ASH	100 lb sack	500 lbs
POTASSIUM NITRATE	50 lb sack	200 lbs
CAUSTIC SODA	55 gal drum	1,100 gals
DESCALENT*	275 gal tank	1,000 gals
DESCALENT*	5,000 gal tank	2,500 gals
LIME	100 ton bulk tank	35 tons
LIME	50 lb sack	1,000 lbs
SALT (NaCl)	50 lb sack	100 lbs

*Poly acrylate, polymalic anhydride.

2. PESTICIDES

Pesticides are not a normal product used on site. No storage is designated. Approval from the BLM is required prior to any pesticide use.

3. EXPLOSIVES

All explosives are kept in storage magazines or other storage facilities approved by MSHA. Average quantities kept on hand are:

1 Pound Boosters	500
2 Pound Boosters	1,000
3 Pound Boosters	100
Ammonium Nitrate	50,000 lbs
Emulsion	40,000 lbs
Assorted Delays and Connectors	2,500 units
Detonating Chord	20,000 feet

4. PETROLEUM PRODUCTS

All bulk petroleum products are stored in steel tanks with corrosion resistant paint on the outside. All bulk tanks are provided with adequate secondary containment.

Contractor Maintained Storage:

1 ea. - Unleaded Fuel Tank	(2,000 gallon)
4 ea. - Bulk Oil Tanks	(1,000 gallon)
1 ea. - Diesel Fuel Tank	(25,000 gallon)
1 ea. - Waste Oil Tank	(4,000 gallon)
4 ea. - Oil Storage	(200 gallon)
1 ea. - Emulsion Tank	(12,000 gallon)
1 ea. - Ammonia Nitrate Tank	(20,000 gallon)

Contractor Maintained Barrels: (Typical Quantities on-site)

10 ea. - Diesel Fuel Conditioner	(550 gallon)
7 ea. - Methanol	(385 gallon)
5 ea. - Antifreeze	(275 gallon)
3 ea. - Kerosene	(165 gallon)
40 ea. - Oils	(2,200 gallon)
17 ea. - Grease	(935 gallon)

· USMX OF UTAH, INC. Company Fuel Storage:

<u>Fuel</u>	<u>Location</u>	<u>Capacity</u>
Propane	Plant	3,000 gal
Diesel	Plant	6,000 gal
Propane	Intermediate Pump	250 gal
Diesel	Intermediate Pump	500 gal
Propane	D.I. Ranch	250 gal
Diesel	D.I. Ranch	1,000 gal
Diesel	Leach Pad II	500 gal
Gasoline	Office	500 gal
Gasoline	Office	250 gal

